



# Era Aviation, Inc.

## PROCESS SPECIFICATION

ERA AVIATION INC.

GULF COAST DIVISION  
LAKE CHARLES, LOUISIANA

PROCESS SPECIFICATION NO. 4011

APPLICATION OF EXPANDED FOILS TO FIBERGLASS REINFORCED PLASTIC

Prepared By: *Dave Murphy* Date: 17OCT90  
Dave Murphy

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Quality Control: Dave Murphy

Engineering: *P. A. Schwartz Jr.* Date: 10/17/90  
Peter Schwartz Jr

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REVISION	BY DATE	PAGES AFFECTED	REVISION DESCRIPTION	APPROVED DATE
IR		ALL	INITIAL RELEASE	<i>T. Schwartz</i> 10/17/90

## ERA PROCESS SPECIFICATION

ERA P S 4011 REV I DATE 17OCT90SCOPE

This specification outlines the requirements for application of a expanded foils on the exterior of a fiberglass reinforced plastic product.

CONFORMATION

This specification does not conform to any existing goverment specification.

CONFLICTS

In the event of a conflict with engineering drawing (s) and this specification, the drawing (s) shall govern.

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<u>MATERIALS</u>	<u>NAME</u>	<u>MANUFACTURER</u>
RESIN	Derakane 8084	Dow Chemicals Midland, MI.
MEKP Catalyst	Hi-Point 90	Witco Chemical Richmond, CA.
UV Inhibitor	UV-9	Industrial Chemicals Atlanta, GA.
Pigment	CoPlas pigment	CoPlas Fort Smith, AR.
	Spartan pigment	Spartan Pigments Houston, TX.
Gel Coat	Gel Coay	CoPlas Fort Smith, AR.
Expanded Metal Foil	5CU 7-125 Flattened & Annealed	Delker Corp. Branford, CT.
Paraffinated Styrene	TF-100	Industrial Chemicals Atlanta, GA.
Styrene Monomer	Styrene Monomer	Huntsman Chemical Baton Rouge, LA.

**ERA PROCESS SPECIFICATION**

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1. Sand the area with 40 grit DA paper where the copper screen is to be installed.
2. Apply copper screen to the surface that has been sanded and coat it with a hot coat of 8084 resin containing UV inhibitor and pigment. Allow to cure until hard.
3. Apply a coat of the gel-coat containing UV inhibitor and wax styrene. Allow to cure until hard.
4. Apply a "Wax" coat of gel-coat containing UV inhibitor and wax styrene. Allow to cure until hard.
5. Sand the area with 80 grit DA paper until the entire top of the copper screen can be seen.
6. Final finish will be in accordance with preparations for painting the item.

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### INSPECTION

It is the purpose of the inspection to verify that each part has been fabricated in accordance with and meets the requirements of this specification.

#### RESPONSIBILITIES:

IT IS THE RESPONSIBILITY OF THE FABRICATOR TO MAKE AVAILABLE TO ERA HELICOPTER OR ITS AUTHORIZED REPRESENTATIVE ANY OF ALL THE FOLLOWING:

#### RECORDS:

Records pertaining to the part(s) being purchased shall be supplied when requested. These may include:

- Materials specifications
- Equipment drawings or mold jig
- Materials test results
- Dimensional verification reports
- Rework and repair reports

#### MATERIALS:

Raw material used shall be virgin materials and shall be visually free of contaminants.

#### FABRICATED PARTS:

The part to be inspected shall be properly located and positioned, and shall be in condition to permit a thorough inspection. Reasonable means shall be provided to permit the inspector to visually examine the entire non skid surface of the part.

Allowable defects are listed on page 5.

ERA P S 4011 REV I DATE 17OCT90**TEST OF FINISHED PARTS:**

The following basic tests shall be included as a minimum in the acceptance inspection:

Surface Cure Test - A rag and an acetone squeeze bottle with acetone shall be provided to determine if the resin has fully cured. The procedure for this is to rub a few drops of acetone on the surface and check for tackiness after the acetone has evaporated. Persistent tackiness indicates an incomplete cure.

Dimensions - The inspector shall be provided with copies of all approved drawings or patterns.

Inspection - Expanded metal foil should be partially exposed with no breaks or voids in foil.

**APPLICABLE DOCUMENTS:****ASTM Standards**

C 581-74 - Test Method for Chemical Resistance of Thermosetting Resins used in Glass Fiber Reinforced Structures

D 638-77a - Test Method For Tensile Properties of Plastics

D 883-78a - Definitions of Terms Relating to Plastics

**ALLOWABLE DEFECTS**

<u>Defect</u>	<u>Allowable for Surface</u>
Exposed scuffed area	None
Non cured areas	None
Voids or broken strands in metal foil	None

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